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MOTOROLA, INC. 1303 EAST ALGONQUIN ROAD IL01/3RD SCHAUMBURG, IL 60196				
EXAMINER				
WONG, WARNER				
ART UNIT		PAPER NUMBER		
2416				
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

Docketing.US@motorola.com

Office Action Summary

Application No.

09/973,206

Applicant(s)

HARRIS, JOHN M.

Examiner

WARNER WONG

Art Unit

2416

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 20 April 2009.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-7 and 12-17 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-7 and 12-17 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____

DETAILED ACTION

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

1. Claims 1-2 and 4 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kokko (US 5, 790,534) in view of Applicant's Admitted Prior Art (AAPA) and Vidyannand (US 6,330,071).

Regarding claim 1, Kokko describes a method used in a base site (BS) (fig. 1), comprising:

determining, by a wireless infrastructure, a radio frequency (RF) load metric corresponding to a base site (fig. 1, 14 B & C, load control & monitor (determining) at the BS (wireless infrastructure));

comparing, by a wireless infrastructure, the determined RF load metric to an RF load threshold to produce a comparison (col. 6, lines 34-46, BS compares whether if adequate resources exist (threshold) to handle the requests (load));

Kokko describes the receiving mobile station having a delay-based buffer with depth target (fig. 1 & col. 7, lines 26-32, buffer 1 in MS1 12 monitors number of packets (depth) in buffer 12A whether it exceeds threshold (depth target) for compensating any delay differences), but fails to explicitly describe a jitter buffer.

AAPA describes that it is well-known within a cellular radio communication system that a cellular radiotelephone comprises a jitter buffer (p.1).

It would have been obvious to one with ordinary skill in the art at the time of invention by applicant to interpret the jitter buffer within the cellular radiotelephone described by AAPA as the delay-based buffer in the MS of Kokko.

The motivation for combining the teaching is that it enables the control of the communication traffic loading subjected to variations from circuit switched and packet switch traffic between the mobile terminals and the BS (Kokko, col. 1, lines 34-38).

Kokko and AAPA combined failed to explicitly describe:

the wireless infrastructure determining of the jitter buffer depth target of a receiving mobile station based on the comparison.

Vidyanand describes: an infrastructure node determining the buffer depth target of receiving node based on a comparison (fig. 14 & col. 7, lines 37-38, client (infrastructure node) determines the memory size (buffer depth target) of receiving printer (node) from a configuration evaluation (comparison), col. 6, lines 29-33).

It would have been obvious to one with ordinary skill in the art at the time of invention by applicant to further specify the determination of buffer depth target of receiving node from a comparison as in Vidyanand as an additional control step to the comparison by the wireless infrastructure to the mobile station of Kokko and AAPA combined.

The motivation for combining the teachings is that it enables jobs (data) efficiently organized to be received by the receiving node (Vidyanand, col. 5, lines 30-31).

Regarding claim 2, Kokko, AAPA and Vidyanand combined further suggest: the determined RF load metric is greater than the RF load threshold, a jitter buffer depth target is used that is appropriate for a communication using retransmissions (Kokko, col. 6, lines 37-46, when overloading occurs, BS 16 denies MS 12 transmission in the next frame, requiring retransmission at a later time).

Regarding claim 4, Kokko describes that determining a RF load metric comprises determining an RF load (col. 6, lines 34-37), also further suggesting: when the determined RF load metric is greater than the RF load threshold, determining to retransmit erroneously received frames (col. 6, lines 25-46, BS determines whether if the MS may be permitted to re-transmit the NACK-ed frames).

2. Claims 3 and 14-15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kokko, AAPA and Vidyanand as applied to claim 2 above, and further in view of Laakso (US 6,671,512).

Regarding claim 3, Kokko teaches that determining a RF load metric comprises determining an RF load (col. 6, lines 34-37), with the loading monitor calculates the maximum allowable power to be used in the area of its cell (col. 7, lines 50-52), but fails to explicitly teach: determining to transmit frames at a lower power level when the determined RF load metric is greater than the RF load threshold.

Laakso describes traffic load control for a wireless telecommunication (abstract), suggesting: determining to transmit frames at a lower power level when the determined RF load metric is greater than the RF load threshold (col. 11, lines 4-7, MS drops (lowers) power when uplink RF is overloaded).

It would have been obvious to one with ordinary skill in the art at the time of invention by applicant to use power level in compensating the (RF load metric) channel quality as in Laakso for the RF compensation of Kokko.

The motivation for combining the teaching is that it allows a simplest form for controlling the RF load (Laakso, col. 11, line 5).

Regarding claim 14, Kokko, AAPA and Vidyanand combined further describe:

a determination of bearer channel at a base site that are engaged in active communications (Kokko, col. 6, lines 41-45, BS 15 (base site) determines if remote terminal 12 may use the traffic (bearer) channels TCHs (active communications)).

Regarding claim 15, Kokko, AAPA and Vidyanand combined further describe:

a determination of bearer channels at a base site that are engaged in active communications (Kokko, col. 6, lines 41-45, BS 15 (base site) determines if remote terminal 12 may use the traffic (bearer) channels TCHs (active communications)) and that are employing retransmissions of erroneously received radio link protocol frames (Kokko, col. 6, lines 24-28, ACKs/NACKs of given packet determines if packet is successfully received or requires retransmission. Also described in AAPA p.2).

3. **Claims 5, 7, 12-13** are rejected under 35 U.S.C. 103(a) as being unpatentable over Kokko, AAPA and Vidyanand as applied to claim 1 above, and further in view of Uesugi (US 2003/0072266).

Regarding claim 5, Kokko, AAPA and Vidyanand combined teach using a jitter buffer for wireless communication and using ACK/NACKS (AAPA, p1-2), but fails to teach:

when the determined RF load metric is less than the RF load threshold, a jitter buffer depth target is used that is appropriate for a communication using a reduced number of retransmissions.

Uesugi teaches wireless transmission using ACK/NACKs, comprising: assigning a communication using a reduce number of retransmissions (fig. 3 & paragraph 44, when reception quality (RF load metric) is poor, number of retransmissions are reduced).

It would have been obvious to one with ordinary skill in the art at the time of invention by applicant to reduce the number of retransmissions when the channel quality (RF load metric) is poor as in Uesugi for the wireless transmission of Kokko, AAPA and Vidyanand.

The motivation for combining the teaching is that it improves the efficiency of the (overall) transmission (Uesugi, abstract).

Regarding Claim 7, Kokko, AAPA and Vidyanand combined teach that determining a RF load metric comprises determining an RF load (col. 6, lines 34-37), but fails to teach:

when the determined RF load metric is less than the RF load threshold, determining to reduce a use of retransmissions of erroneously received frames.

Uesugi teaches wireless transmission using ACK/NACKs, comprising: when the determined RF load metric is less than the RF load threshold, determining to reduce a use of retransmissions of erroneously received frames (fig. 3 & paragraph 44, when reception quality (RF load metric) is poor, number of retransmissions are reduced).

It would have been obvious to one with ordinary skill in the art at the time of invention by applicant to reduce the number of retransmission when the channel quality (RF load metric) is poor as in Uesugi for the wireless transmission of Kokko, AAPA and Vidyanand.

The motivation for combining the teaching is that it improves the efficiency of the (overall) transmission (Uesugi, abstract).

Regarding claim 12, Kokko, AAPA, Vidyanand and Uesugi combined further describe:

a step of determining to retransmit erroneously received frames when the determined RF load is greater than the RF load threshold (Uesugi, fig. 3 & paragraph 44, when reception quality (RF load metric) is good, number of retransmissions are increased (i.e. more retransmit)).

Regarding claim 13, Kokko, AAPA, Vidyanand and Uesugi combined further describe:

a step of determining to reduce a use of retransmission of erroneously received frames when the determined RF load is less than the RF load threshold (Uesugi, fig. 3 &

paragraph 44, when reception quality (RF load metric) is poor, number of retransmissions are reduced).

4. Claims 6 and 16-17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kokko in view of AAPA, Vidyanand and Uesugi as applied to claim 5 above, and further in view of Simonsson (US 6,950,669).

Regarding claim 6, Kokko teaches that determining a RF load metric comprises determining an RF load (col. 6, lines 34-37), with the loading monitor calculates the maximum allowable power to be used in the area of its cell (col. 7, lines 50-52), but fails to explicitly teach:

determining to transmit frames at a higher power level when the determined RF load metric is less than the RF load threshold.

Simonsson suggests: determining to transmit frames at a higher power level when the determined RF load metric is less than the RF load threshold. (fig. 6, step 604 & col. 7, lines 51-58, after compensating for base station/cell's packet data loading, the power level for individual channels for a mobile is raised if the channel quality is lower (RF load metric is lower than RF load threshold) than that for the channel's pre-determined data rate (threshold)).

It would have been obvious to one with ordinary skill in the art at the time of invention by applicant to use power level in compensating the (RF load metric) channel quality as in Simonsson for the RF compensation of Kokko.

The motivation for combining the teaching is that it improves the channel quality in packet data mobile radio networks (Simonsson, col. 2, lines 8-11).

Regarding claim 16, Kokko, AAPA and Vidyanand combined further describe:

a determination of bearer channel at a base site that are engaged in active communications (Kokko, col. 6, lines 41-45, BS 15 (base site) determines if remote terminal 12 may use the traffic (bearer) channels TCHs (active communications)).

Regarding claim 17, Kokko, AAPA and Vidyanand combined further describe:

a determination of bearer channels at a base site that are engaged in active communications (Kokko, col. 6, lines 41-45, BS 15 (base site) determines if remote terminal 12 may use the traffic (bearer) channels TCHs (active communications)) and that are employing retransmissions of erroneously received radio link protocol frames (Kokko, col. 6, lines 24-28, ACKs/NACKs of given packet determines if packet is successfully received or requires retransmission. Also described in AAPA p.2).

Response to Arguments

5. Applicant's arguments with respect to claims 1-7 and 12-17 have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

6. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure: Blanco (US 6,249,530) describing a dynamic determination of window size for a destination buffer.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to WARNER WONG whose telephone number is (571)272-8197. The examiner can normally be reached on 6:30AM - 3:00PM, M-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Chi Pham can be reached on (571) 272-3179. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Warner Wong
Examiner
Art Unit 2416

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